

## Glossary of “Green” Terms

**Brownfields** - abandoned or under-used industrial and commercial sites, sometimes characterized by environmental degradation and contamination, available for re-use.

**Carbon calculator** - a tool to estimate a person's carbon emissions, based on how much energy and what kind of energy is used in daily activities. The result of the calculation is an estimated emission figure in terms of tons of CO<sub>2</sub>- that is a person's Carbon Footprint.

**Carbon footprint** - the direct effect one's actions and lifestyle have on the environment in terms of carbon dioxide emissions. This is usually estimated by using a Carbon Calculator. From our home electricity use, to travel, to our diet, to the clothes we wear, all of our actions involve emission of carbon dioxide and have direct or indirect impact in accelerating climate change.

**Composting** - a process whereby biodegradable material (such as food waste or yard waste) is converted, in the presence of oxygen from the air, into a stable granular material which, applied to land, improves soil structure and enriches nutrient content.

**Damaged or lost stream** - A stream bed may be lost (dry up) if too much water is taken from it or the stream's course has been changed to divert it for other uses, such as irrigation.

**Ecosystem services** - the goods and services provided by healthy ecosystems, for example, the pollination of crops by bees, bats or birds; the flood protection provided by wetlands; or the filtration of air and water by vegetation and soils.

**Environmental stewardship** - an understanding that responsible management of healthy ecosystems improves the quality of life for present and future generations.

**Fertilizer management plan** - Managing the amount, source, placement, form and timing of the application of nutrients and soil amendments so over application and loss of nutrients to surface and ground water does not occur.

**Floodplain** - land adjacent to a river, stream, lake, estuary, or other water body that is subject to flooding. If left undisturbed, floodplains filter sediments and other pollutants and keep them from entering the groundwater or downstream ecosystems, reduce peak flow rates and downstream impacts, recharge the groundwater, and store and reduce flood elevations.

**Geothermal** - a renewable energy technology that relies on the fact that the Earth (beneath the surface) remains at a relatively constant temperature throughout the year, warmer than the air above it during the winter and cooler in the summer. A geothermal heat pump takes advantage of this by transferring heat stored in the Earth or in ground water into a building during the winter, and transferring it out of the building and back into the ground during the summer using a ground heat exchanger.

**Green infrastructure** - An adaptable term used to describe an array of products, technologies, and practices that use natural systems – or engineered systems that mimic natural processes – to enhance overall environmental quality and provide utility services. As a general principal, green infrastructure techniques use soils and vegetation to infiltrate, evapotranspire, and/or recycle stormwater runoff.

**Green roofs** - are rooftops planted with vegetation. Intensive green roofs have thick layers of soil (6 to 12 inches or more) that can support a broad variety of plant or even tree species. Extensive roofs are simpler green roofs with a soil layer of 6 inches or less to support turf, grass, or other ground cover. They provide evaporative cooling, convert carbon dioxide to oxygen, and reduce stormwater runoff.

**Green walls** - are walls, either free-standing or part of a building, that are partially or completely covered with vegetation and, in some cases, soil or an inorganic growing medium. They are also referred to as living walls, biowalls, or vertical gardens.

**Green-washing** - the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service.

**Greyfield** - previously developed properties that are not contaminated. They are usually, but not exclusively, former commercial properties that may be underutilized, derelict or vacant.

**Greywater** – non-drinkable water that can be reused for irrigation, flushing toilets, and other purposes.

**Groundwater recharge areas** - Recharge is the process by which ground water is replenished. A recharge area is where water from precipitation is infiltrated downward to an aquifer. Most areas, unless composed of solid rock or covered by development, allow a certain percentage of total precipitation to be infiltrated. Areas which transmit the most precipitation are often referred to as "high" or "critical" recharge areas. Recharge is promoted by natural vegetation cover, flat topography, permeable soils, a deep water table and the absence of confining beds.

**Healthy soils** - Soil performs valuable functions: nourishing plants, absorbing and cleaning stormwater. These functions are often degraded during development when soil is removed or compacted. No matter what type of soil you have the addition of organic matter will work wonders for its health. Organic matter is plant and animal residues in varying forms of decomposition. It will replenish the nutrients in your soil and improve its texture. You may have heard countless times about adding your leftovers and glass clippings to a compost heap. This is a great idea as your compost is the best form of organic matter. Compost in an advanced stage of decomposition (dark and without smell) is magic for your soil. It encourages microorganism activity causing soil particles to clump together and form aggregates. The aggregates allows for spaces in the soil therefore increasing its drainage. This is especially beneficial for clay soils, which have poor drainage. Other forms of organic matter are animal manure and peat moss.

**Impervious surfaces** - surfaces where water cannot infiltrate back into the ground such as roads, sidewalks, driveways, parking lots and rooftops that are covered by impenetrable materials. Soils compacted by urban development are also highly impervious.

**Invasive species** – plants, animals and pathogens that are not native to an area, and when introduced can cause harm to the economy, environment, and human health. While not all non-native species are invasive, some can really do damage to our public and private lands. Invasive species are highly adaptable to different habitats, grow quickly or reproduce abundantly, are difficult to eradicate and can negatively impact our native species. To learn more about invasive species refer to <http://www.dcnr.state.pa.us/conservationscience/invasivespecies/index.htm>.

**LEED** - Leadership in Energy & Environmental Design (LEED) Green Building Rating System™: is a voluntary, consensus-based standard to support and certify successful green building design, construction and operations. For a project to become LEED certified it is required that the project follows energy efficiency, environmentally conscious methods, as defined by the LEED Green Building Rating System, Version 2.1, November 2002, in the following areas:

1. Sustainable Sites (SS)
2. Water Efficiency (WE)
3. Energy & Atmospheric (EA)
4. Materials & Resources (MR)
5. Indoor Environmental Quality (EQ)

**Lawn care management** - creating a sensible approach to lawn management. Consider these simple techniques:

- Consider applying a  $\frac{1}{8}$ "–  $\frac{1}{4}$ " top dressing of a thoroughly decomposed organic matter such as garden compost, well-seasoned manure (never fresh), municipal leaf compost to your turf. This will improve soil drainage, add organic nutrients and improve your soil's capacity to hold water.
- If you are going to apply fertilizer the ideal periods for application take place between the last lawn mowing and Thanksgiving and the first two weeks in September, when fertilizer will feed the roots (bottom growth), not the leaves. Spring fertilizing encourages leaf growth (top growth) and feeds weed species.
- Set your blades for a mowing height that will remove only the top one-third of the grass. Higher settings allow the grass species to compete effectively with lower growing weed species. Higher growth also shades the ground from the sun, reducing the need to water. Begin the season mowing at 2.5"; gradually raise the mower height as the warm season continues to 3.5" in the heat of the summer.
- A well-tuned lawn mower engine burns cleaner fuel and reduces emissions.
- Turf clippings left on the lawn can contribute a substantial amount of nitrogen and other nutrients to the soil, thus reducing fertilizer requirements. Turf clippings are mostly composed of the grass's leaf tissue and thus decompose rapidly.
- Allow the wildflowers in your lawn. Are no dandelions worth the expense and potential side effects of chemicals?

**Native vegetation** - Pennsylvania's native plants are those that were growing naturally in Pennsylvania prior to Europeans arriving. Pennsylvania has over 3,081 species of native trees, shrubs, flowers, and other forms of plants. Landscaping with native plants has several appealing factors, refer to <http://iconservepa.org/nativeplants.html> for more information on landscaping with natives.

**Permeable paving** - "Permeable" is a term used to describe paving methods for roads, parking lots and walkways that allow the movement of water through the paving material. Although some porous paving materials appear nearly indistinguishable from nonporous materials, their environmental effects are qualitatively different. Whether porous asphalt, concrete, paving stones or bricks, these pervious materials allow precipitation to percolate through and into the groundwater.

**Potable** - Suitable for drinking.

**Rain gardens** - excavated shallow surface depressions designed to collect, absorb, and filter stormwater runoff from roof tops, driveways, patios, and other areas that don't allow water to soak in. Rain gardens can be shaped and sized to fit any size yard, are constructed with soil mixes that allow water to soak in rapidly and support healthy plant growth, and can be landscaped with a variety of native plants to fit the surroundings. Rain gardens provide multiple benefits, including:

- Filter oil and grease from driveways, pesticides and fertilizers from lawns, and other pollutants before they reach the storm drain and eventually streams, wetlands, lakes and marine waters.
- Reduce flooding on neighboring property, overflow in sewers, and erosion in streams by absorbing water from impervious surfaces.
- Provide habitat for beneficial insects and birds.
- Increase the amount of water that soaks into the ground to recharge local groundwater.

**Renewable energy** - energy generated from natural resources—such as sunlight, wind, water and geothermal which are all naturally replenished. While most renewable energy projects and production is large-scale, renewable technologies are also suited to small off-grid applications, sometimes in rural and remote areas.

**Riparian** - A **riparian zone** or **riparian area** is the interface between land and a stream. Riparian zones may be natural or engineered for soil stabilization or restoration. These zones are important natural biofilters, protecting aquatic environments from excessive sedimentation, polluted surface runoff and erosion. They supply shelter and food for many aquatic animals and shade that is an important part of

stream temperature regulation. When riparian zones are damaged by construction, agriculture or silviculture, biological restoration can take place, usually by human intervention in erosion control and revegetation.

**Seasonal pools** - also known as vernal pools, temporary ponds, woodland pools, ephemeral wetlands, among other names, are isolated aquatic habitats that undergo periodic drying. Melting snow, run-off, and spring rains fill these small depressions to their maximum water levels in early spring ("vernal" is derived from the Latin word for spring). These same pools may completely dry out by late summer. The isolation of seasonal pools (lack of permanent surface water connections to other water bodies) and their periodic drying keep them free from populations of predatory fish. This reduced-predator environment is essential for the breeding success of many amphibian species in mid-Atlantic and northeastern United States. Seasonal pools support local and regional biodiversity by serving as important breeding, nursery, and feeding grounds for wildlife, including amphibians, invertebrates, turtles, snakes, mammals, and birds.

**Stormwater management** - the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment. Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and BMPs, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

**Sustainable Sites** - design, construction, operation and maintenance practices at a specific site that meet the needs of the present and future while sustaining the health, diversity and productivity of the natural ecosystem.

**Topsoil** - the uppermost layer of soil, usually the top 2 inches (5.1 cm) to 8 inches (20 cm). It has the highest concentration of organic matter and microorganisms and is where most of the Earth's biological soil activity occurs. Plants generally concentrate their roots in and obtain most of their nutrients from this layer. A major environmental concern known as topsoil erosion occurs when the topsoil layer is blown or washed away. Without topsoil, little plant life is possible. It takes approximately 100 years for 1 inch (2.5 cm) of topsoil to be deposited, if there is the correct ratio of organic material, inorganic material, and moisture.

**Unorganized (recreational) play** - spontaneous play that develops a child's imagination and creativity. Unorganized play can involve activities such as nature walks, scavenger hunts, and play with other children where they are able to negotiate their own rules. When children learn to take turns and create their own rules, they have asserted their independence, taken control over their lives in a small way, and promoted their own moral development by solving conflicts. Unorganized play is critical to learning; it teaches children how they should behave in society and how to get along with other people. It's a natural way for children to learn about life.

**Wetlands** - provide a multitude of ecological, economic and social benefits. They provide habitat for fish, wildlife and a variety of plants. Wetlands are nurseries for many fish of commercial and recreational importance. Wetlands are also important landscape features because they hold and slowly release flood water and snow melt, recharge groundwater, act as filters to cleanse water of impurities, recycle nutrients, and provide recreation and wildlife viewing opportunities.